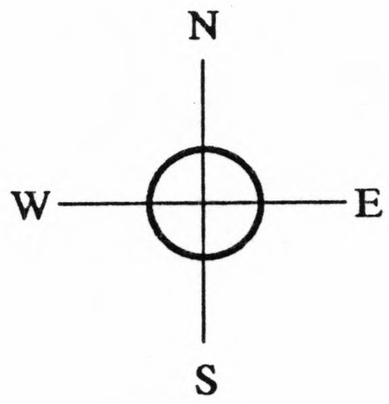
ROADMAP

A Guide to XENIX Documentation

THE • SANTA • CRUZ • OPERATION

This document was typeset with an IMAGEN® 8/300 Laser Printer.

Document Number: G-8-26-85-2.0/1.0



CONTENTS

INTRODUCTION

The documentation for a large and comprehensive operating system can sometimes take on a complexity of its own. The XENIX documentation is a complete set of over 3000 pages spanning information on hundreds of utilities, procedures, and routines. This can be a valuable resource, and the *Roadmap* is guide to using it as effectively as possible.

The *Roadmap* is a collection of introductory and reference material that helps you locate documentation on a command, concept, or other area of XENIX. Its purpose is both to orient the user by "mapping" the organization of the guides, and to act as a shortcut to finding information.

The first section orients the user by describing the kinds of things each guide covers. Other sections point the user to the guide appropriate to what is being sought. The user can search for information by command, or by the type of information being sought (*getting started, file editing, status information*, and so on).

USING THIS GUIDE

ORGANIZATION

The *Roadmap* has five parts:

Questions and Answers

This is a group of questions commonly asked about XENIX and its documentation.

Contents Summary

This is a "map" of what each XENIX guide covers. Major chapters are listed and contents are summarized for quick reference.

Cross Reference

This section lists the kinds of everyday tasks you can do with XENIX and in which guide or guides they can be found. This is useful when you want to do something specific, but aren't sure where to look.

Command Page Index

This section is an index to XENIX command or *man* pages. You look up the command name to find the page and its location.

Command/Topic Index

This section is also an index to commands. You look up a topic such as *Pattern Matching* and find the *man* page.

CONVENTIONS

Several conventions have been used in this guide. For example, the names of guides are abbreviated in text:

Release Notes	RN
Installation Guide	IG
Roadmap	RM
Introduction to XENIX	IX
User's Guide	UG
Operations Guide	OG
Text Processing Guide	TP
User's Reference	UR

When a section of a guide is noted, it follows the abbreviation for the name of the guide. For example, the *User's Reference*, which describes many XENIX commands, is divided into three sections, "C," "M," and "F."

The "C" section of the *User's Reference* is expressed as:

UR(C)

Commands are always shown with the section in which they are found. For example, the *vi* command is expressed as:

UR vi(C)

Note

The *Roadmap* is a guide to the *user* documentation listed above. However, the Command Page and Command/Topic Indexes also index the *Programmer's Reference*:

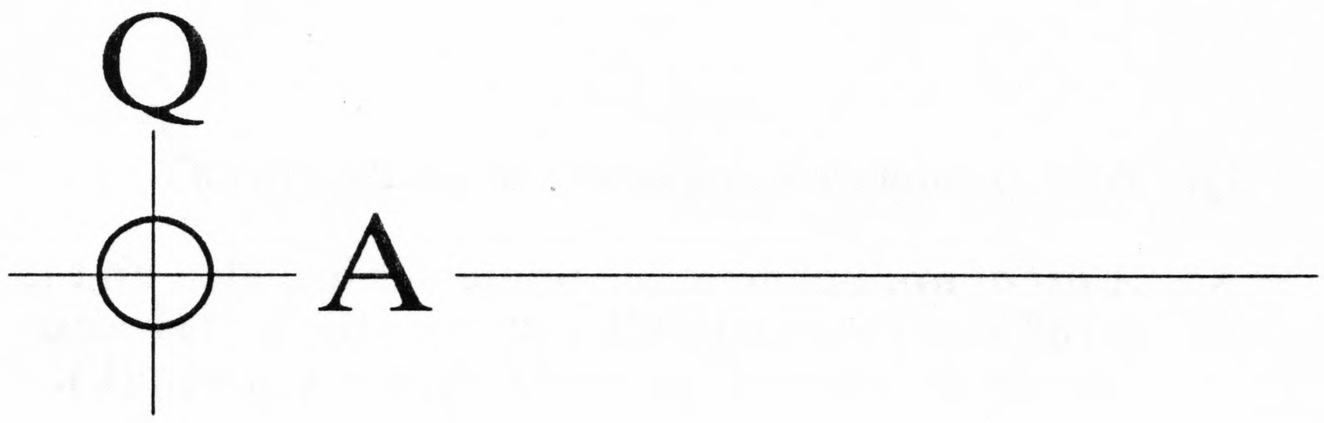
Programmer's Reference	PR (CP and S sections)

As the *Roadmap* is a guide to the basic XENIX user documentation, the above programming guides are not otherwise indexed here.

PRACTICAL USE

The *Roadmap* is intended as both an orientation to the XENIX documentation, and as a reference guide in itself.

YOU CAN USE DIFFERENT SECTIONS TO FIND OUT . . .	. . . BY LOOKING IN
How the guides are organized and what each covers	Contents Summary (p. 5)
Where to look to learn how to do a specific task	Cross Reference (p. 31) Command/Topic Index (p. 38)
Where to look to find a certain command	Command Page Index (p. 56)



Here are some questions commonly asked about the XENIX documentation, with responses.

Q: When should I use the command documentation (**man** pages) as opposed to the other documentation?

A: *The* **man** *pages are intended for reference and document commands only. Once you learn the format of* **man** *pages, they are a quick way to learn how a command works.*

The rest of the documentation explains not only commands, but includes more detailed information and examples.

Q: How do I know which group of **man** pages documents the commands I'm looking for?

A: *In an effort to make the large amount of XENIX command documentation more accessable,* **man** *pages have been split across three guides: The User's Reference contains user-oriented commands, The Programmer's Reference contains commands for programming, and The Text Processing Guide documents text processing commands.*

Q: I looked for documentation on **spell** in the *User's Reference* but couldn't find any. Where do I find out how to use this facility?

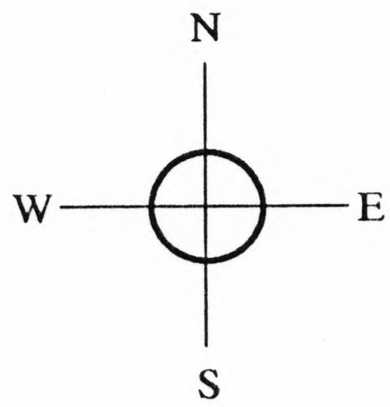
A: **spell** *is a text processing tool, so it is documented in the* **man** *page section (CT) of the Text Processing Guide.*

Q: What printers are supported for use with **nroff**?

A: *A list of* **nroff** compatible printers is included on the **nroff** man page in the CT section of the *Text Processing Guide*. See also TP term(CT), and UR term(F).

Q: Where can I find information on the **sed** and **awk** programs?

A: **sed** and **awk** are facilities that allow large scale, non-interactive of very large or multiple files. They are described in Appendix A of the *Text Processing Guide*.



CONTENTS SUMMARY

This section is a quick reference to major topics in the XENIX guides.

The primary chapters of each guide are listed in an easily readable format.

Name

Release Notes - Documents special features of a given XENIX release

Synopsis

- Notes on installation
- Compatibility of XENIX with various kinds of software and hardware
- Features of the specific release
- Notes on hardware and software
- Notes on the documentation
- Listings of the files contained in this release

Description

The Release Notes contain many useful notes, suggestions, and general information about the release of XENIX for your computer. This includes lists of the applications software that are compatible with this release of XENIX, as well as supported hardware such as computers, hard disks, and memory cards.

The Release Notes also include information about features that are new to the release of XENIX, and things that have changed from previous releases.

Finally, documentation errors are listed, plus a complete listing of the XENIX files included on your distribution media.

See Also

Installation Guide, Introduction to XENIX

Name

Installation Guide – Installing XENIX on your computer

Synopsis

- Step by step guide to installing XENIX
- Adding peripherals such as modems, hard disks, and printers
- Using both the XENIX and DOS operating systems

Description

The Installation Guide explains how to install XENIX on your computer. The procedure is largely automated so that all you have to do is insert the media (tape or disk) containing XENIX and answer the questions that appear onscreen. The procedure takes you through installation, and creation of the super-user (administration) account and first user accounts.

Partitioning hard disk to provide more storage space for files is also discussed. This includes setting up filesystems on the disk, and arranging it so that you can use the DOS operating system in addition to XENIX.

See Also

Operations Guide, UR(C): fdisk, badtrk, fsck, su, mkuser

INSTALLATION GUIDE

INSTALLATION PROCEDURE

- First user account
- System distribution
- Installation procedure
- Super-user password

USING DOS ON THE SAME DISK

- Partitioning with fdisk
- Installation on a DOS system
- DOS accessing utilities

Introduction to XENIX (IX)

Name

Introduction to XENIX - Introduces basic facilities and concepts of XENIX

Synopsis

- Demonstration of a sample XENIX session
- Introduction of basic XENIX concepts
- Performing typical tasks with XENIX

Description

The Introduction to XENIX begins by taking you through a sample XENIX session. This includes "logging in" (typing your name, password, and terminal type), how to correct simple typing mistakes, and how to give XENIX commands.

Basic concepts are then introduced, including: files and filesystems, commands, and how to direct the results of a command to a file.

Finally typical tasks for which XENIX is used are explained, including: manipulating files and directories, controlling processes, and getting status information.

All of this information is included elsewhere in greater depth, but this guide touches on many important concepts, and should be read first to get a quick idea of what you can do with XENIX.

See Also

Release Notes, Installation Guide, User's Guide, Operations Guide

INTRO TO XENIX

BASIC CONCEPTS

- Files and file systems
- Naming conventions
- Commands
- Input & output

DEMONSTRATION

- Logging in
- Logging out
- Typing commands
- Mistakes in typing
- Stopping a program

INTRO TO XENIX *Continued*

TASKS

- System access
- Process control
- Calculating
- Reminder service
- Terminal setup
- Processing information
- File security
- Status information
- Moving in the file system
- Command line editing
- Communicating with other users
- Lineprinting
- System clock and calendar

Name

User's Guide - Documents basic XENIX facilities

Synopsis

- Using the *vi* and *ed* text editors for file editing
- Using mail to send and receive messages
- Working in different command environments called *shells*
- Using *uucp* to communicate with remote systems

Description

The User's Guide explains how to use several key XENIX facilities, such as text editing and mail. You can begin using them immediately and they will become powerful tools as you learn more about them.

XENIX provides two programs for text editing: *vi* and *ed*. *vi* is an editor that displays a screenful of text and shows changes as they happen, hence the name *vi*, which stands for *visual*.

The *ed* editor is called a *line editor* because only the line you are editing is displayed. Though this may seem an inconvenience, you can do many things with *ed* that are not possible in *vi*.

Using *mail* you can send, receive, forward, and reply to messages. XENIX also includes a program called *uucp* that allows transfer of information to and from other computers.

XENIX uses a set of very flexible command interpreters called *shells*. The shell is a program that takes a user command (such as *mail* or *vi*) and passes it to the computer for action. XENIX offers several shells that are tailored to various kinds of users. All of the shells include powerful command languages that allow unusual control over how and when the commands are actually issued.

See Also

vi(UR-C), ed(UR-C), mail(UR-C), sh(UR-C), csh(UR-C), uucp(UR-C)

USER'S GUIDE

VI: A TEXT EDITOR

- Demonstration
- Solving problems
- Editing tasks
- Environment setup
- Commands summary

MAIL

- Advanced features
- Basic concepts
- Quick reference
- Demonstration
- Commands

THE SHELL

- Basic concepts
- The shell state
- Procedure examples
- Passing arguments
- Invocation
- Grammar
- Redirection
- Shell variables
- A command's environment
- Shell programming
- Special commands

BUILDING A COMMUNICATIONS SYSTEM

- Installation
- Log inquiry
- System to system file copy
- Security
- Command execution
- Maintenance
- System to system execution
- uucp spool directory cleanup

THE VISUAL SHELL

- Getting started
- Visual shell screen
- Reference

THE C-SHELL

- C-shell history
- Shell variables
- Invocation
- Expressions
- Redirection
- Aliases
- Special characters
- Built-in commands
- Command scripts

ED

- Demonstration
- Tasks
- Basic concepts
- Speeding up editing
- Summary of commands
- Context and regular expressions
- Editing scripts
- Cutting and pasting

Name

Operations Guide – Provides information for the system administrator

Synopsis

- Starting and stopping the system
- Using, maintaining, and backing up filesystems
- Adding new user accounts, passwords, and permissions
- Adding peripheral devices (modems, printers, and terminals)
- Solving system problems

Description

The Operations Guide contains various information for the system administrator, the person who keeps the system running smoothly. This may be you, or your computer may have a designated administrator who performs tasks such as adding user accounts or extra terminals.

This guide discusses how files are maintained. Topics include: file security and how to control access through permission levels, regulating file storage space, and how to back up and copy files. Special filesystems used by XENIX are also described.

Peripheral devices, such as modems, printers, and hard disks are also discussed here. Modems are used to let your computer communicate with remote systems over telephone lines. Information on how to set up a modem is also included.

Typical problems encountered by administrators are listed and procedures and solutions are presented. These include: freeing jammed printers, stopping runaway processes, restoring free storage space, and replacing a forgotten password.

See Also

UR(C): su, passwd, pwadmin, mkfs, mount, chmod, chown, df, du, tar, sysadmin, stty, micnet

OPERATIONS GUIDE

INTRODUCTION

- The system manager
- The keyboard
- The Super-user account

STARTING AND STOPPING THE SYSTEM

- Starting the system
- Stopping the system
- Logging in as super-user

MAINTAINING FILE SYSTEMS

- Maintaining free space
- File system integrity

PREPARING FOR USERS

- Adding a user account
- Changing a user's password
- Forcing a new password
- Creating a group
- Changing a user's login group
- Changing a user ID
- Removing a user account

OPERATIONS GUIDE

Continued

BACKING UP FILE SYSTEMS

- Strategies for backups
- Using the sysadmin program
- Using the tar command

USING FILE SYSTEMS

- File systems
- Permissions
- Managing file ownership
- System security
- Using accounting features

OPERATIONS GUIDE

Continued

USING PERIPHERAL DEVICES

- Adding a terminal
- Removing a terminal
- Setting the terminal type
- Setting terminal lines
- Changing serial lines
- Setting serial line operation
- Adding a lineprinter

XENIX DIRECTORIES

- root
- /lib
- /bin
- /dev
- /mnt
- /etc
- /tmp
- Logfiles
- /usr

SOLVING SYSTEM PROBLEMS

- Restoring a nonechoing terminal
- Stopping a runaway process
- Solving lineprinter problems
- Removing hidden files
- Restoring free space
- Restoring lost system files
- Replacing a forgotten password
- Restoring an inoperable system
- Recovering from a system crash
- Changing initialization

BUILDING A MICNET NETWORK

- Planning a network
- Building a network
- Starting the network
- Testing a micnet network
- Using a uucp system

SPECIAL DEVICE FILES

- File system requirements
- Special filenames
- Terminal and network requirements
- Gap and block numbers
- Block sizes

Name

User's Reference - Reference to user level XENIX commands

Synopsis

- Lists commonly used XENIX commands in a standard XENIX format

Description

The User's Reference describes the XENIX commands most often used by the typical user. The format is standard for all commands, so once you learn it, reference is quick and efficient.

Each command (or *man*) page lists the name of the command, how it is used (its "syntax"), and an explanation of the syntax and usage. A section that directs you to other areas of the documentation is also standard. Finally, there is a section called "Notes" that gives special pointers about using the command.

See Also

Programmer's Reference

Text Processing Guide (TP)

Name

Text Processing Guide - Introduces XENIX text processing tools

Synopsis

- Using text editing tools: *grep, diff, comm, sort, wc, cut, paste*
- Using text analysis tools: *spell, style, diction*
- Using text processing "shortcuts:"*macros*
- Formatting and typesetting text: *nroff/troff*
- Formatting tables: *tbl*
- Formatting mathematics: *eqn*
- Using large-scale editing tools: *awk, sed*

Description

The Text Processing Guide introduces a powerful set of text manipulation, formatting, and analysis tools. Using some or all of these facilities in combination, you can create surprisingly professional and visually pleasing documents.

This guide summarizes facilities, introduces general formatting concepts, provides sample projects, and explains how to organize your documents so they will be prepared for formatting later.

Orientation is towards real world applications, with many common document elements described, such as: font characteristics, line and character spacing, paragraphs, headings, lists, diagrams, and tables.

A highlight of this guide is a description of a unique set of text analysis tools. Using these, you can analyze grammatical content of a document, including how hard it is to read for the average person. One facility, called *diction* even checks for redundant or cluttered language.

See Also

vi(UR-C), ed(UR-C)

TEXT PROCESSING GUIDE

WRITING AND EDITING TOOLS

- Commands for text processing
- Using style and diction
- Using spell
- Writing tools

OVERVIEW

- Basic concepts
- A sample project
- Summary
- Formatting documents
- Managing writing projects

TEXT PROCESSING GUIDE *Continued*

MM REFERENCE

- Invoking the macros
- Paragraphs and headings
- Displays
- References
- Memorandum and released paper styles
- Miscellaneous features
- Table of contents
- Lists
- Errors
- Formatting concepts
- Page headers and footers
- Footnotes
- Reserved names
- Summary of macros, strings, and number registers

USING THE MM MACROS

- Getting started with mm
- Using nroff/troff commands
- Basic formatting macros
- Checking mm input with mmcheck

TEXT PROCESSING GUIDE *Continued*

USING NROFF/TROFF

- Inserting commands
- Tabs
- Point sizes and line spacing
- Fonts and special characters
- Strings
- Indents and line lengths
- Drawing lines and characters
- Titles, pages and numbering
- Number registers and arithmetic
- Diversions
- Macros with arguments
- Conditionals
- Macros
- Environments

NROFF/TROFF REFERENCE

- Basic formatting requests
- Processing control facilities
- Output and error messages
- Character translations, overstrike, and local motions
- Summary of escape sequences and number registers

TEXT PROCESSING GUIDE *Continued*

FORMATTING TABLES

- Input format
- Invoking tbl
- Examples
- Command summary

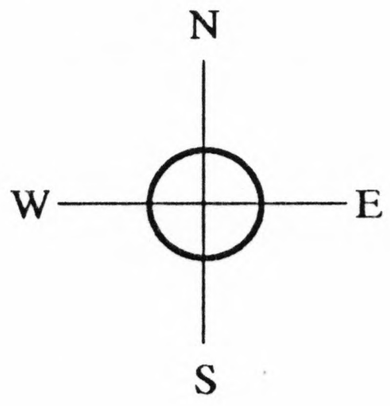
EDITING WITH SED AND AWK

- Introduction
- Pattern matching with awk
- Editing with sed

TEXT PROCESSING GUIDE *Continued*

FORMATTING MATHEMATICS

- Displayed equations
- Basic mathematic constructions
- Layout and design of mathematical text
- Definitions
- Invoking eqn
- Error messages
- In-line equations
- Complex mathematical constructions
- Keywords and precedence summary



CROSS REFERENCE

This section consolidates the XENIX documentation by grouping topics in categories, such as *Getting Started*, *Terminal Specifics*, and *Operations*.

Then it directs you to the appropriate guide and section number covering the topic you are looking for.

GETTING STARTED

- Release notes
- Installation guide — IG 2
- System overview — IX 1
- System demonstration — IX 2
- Basic concepts — IX 3
- System tasks — IX 4

TERMINAL SPECIFICS

- Configuring a terminal — IG 4
- Setting terminal options — UR stty(C), OG 7
- Terminal capabilities — UR termcap(M)
- Terminal modes — UR tset(C)
- Restoring nonechoing terminal — OG 8.2
- Terminal identification — UG tty(C)
- Adding peripherals (printers, terminals) — IG 3
- Using peripheral devices — OG 7, IG 3

OPERATIONS

• The super user	OG 1,2
• Starting and stopping the system	OG 2
• Filesystems: maintenance and backups	OG 5,6
• XENIX Directories	OG B
• System security	OG 4,5
• Solving system problems	OG 8
• Maintaining free space	OG 5
• Adding user accounts	OG 3

STATUS

• How much of the disk is full?	UR du(C)
• How much of the disk is free?	UR df(C)
• Who is on the system?	UR who(C)
• What terminal is this?	UR tty(C)
• What processes are running?	UR ps(C)
• What day/time is it?	UR date(C)
• Information about a user	UR finger(C)

COMMUNICATIONS

• Using Mail	UG 3
• Between remote computers	UG 6, UR uucp(C)
• Building a communications network	OG 9, UR micnet(M)
• Writing from one terminal to another	IX 4, UR write(C)

FILES

• Conventions	IX 4
• Moving in the filesystem	IX 4, UR pwd, mv(C)
• Using file permissions	IX 4, UR chmod, l(C)
• Listing files	IX 4, UR ls, lc(C)
• Displaying file contents	IX 4, UR more, cat, head, tail(C)
• Deleting, creating a file	IX 4, UR rm(C)
• Moving, copying, naming files	IX 4, UR cp, mv(C)
• Finding files	IX 4, UR find(C)
• Editing files	UG 2, UR vi(C)
• Maintaining and backing up filesystems	OG 5,6 UR backup, restore, tar(C)

DIRECTORIES

• Printing your working directory	IX 4, UR pwd(C)
• Listing directory contents	IX 4, UR lc, ls(C)
• Creating, removing	IX 4, UR mkdir, rmdir, rm(C)
• Renaming, moving	IX 4, UR mv, copy, tar(C)
• Using directory permissions	IX 4, UR chmod, l(C)
• XENIX Directories	OG B
• XENIX Special Devices	OG A

THE SHELL

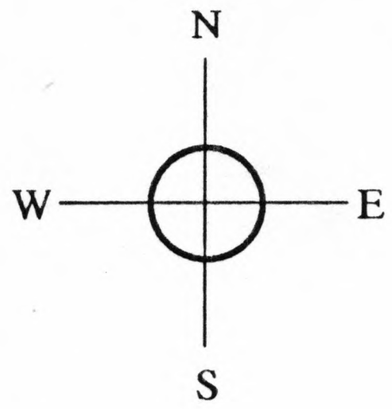
• Variables	UG 4
• Shell environment	UG 4
• Shell procedures/commands	UG 4
• C-shell	UG 7
• Bourne shell	UG 4
• Visual shell	UG 8
• Using expressions	UG 4
• Shell grammer	UG 4

EDITING TOOLS

• Text editors	UG 2, UR vi, ed(C)
• Formatting languages	TP 5,6 UR nroff, troff(C)
• Macro sets	TP 3,4
• Checking spelling	TP spell(CT)
• Checking style and diction	TP style, diction(CT)
• Creating tables	TP 7, TP tbl(CT)
• Formatting mathmatical equations	TP 8, TP eqn(CT)

BASIC COMMANDS

• Who am I?	UR who(C)
• Where am I?	UR where, pwd(C)
• What day/time is it?	UR date(C)
• Changing the account password	UR passwd(C)
• Listing Files/Directories	UR ls(C)
• Viewing a file	UR more, cat(C)
• Copying or moving a file	UR cp, mv(C)
• Removing files/directories	UR rm(C)
• Changing Directories	UR cd(C)
• Access to the Line printer	UR lpr(C)
• Print Working Directory	UR pwd(C)

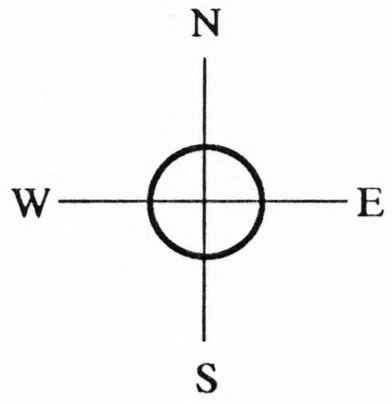


COMMAND/TOPIC INDEX

This section lists common XENIX topics, showing on what page, section, and guide they are to be found.

Command/Topic Index

Commands, Systems Calls, Library Routines, and File Formats



COMMAND PAGE INDEX

This section lists all XENIX commands, showing on what page, section, and guide they are to be found.

Command Page Index

Commands, Systems Calls, Library Routines, and File Formats

waitsem ..... *waitsem*(PR–S)
wall ..... *wall*(UR–C)
wc ..... *wc*(UR–C)
what ..... *what*(UR–C)
who ..... *who*(UR–C)
whodo ..... *whodo*(UR–C)
write ..... *write*(UR–C)
write ..... *write*(PR–S)
wtmp ..... *utmp*(UR–M)
xargs ..... *xargs*(UR–C)
xlist ..... *xlist*(PR–S)
xref ..... *xref*(PR–CP)
xstr ..... *xstr*(PR–CP)
y0 ..... *bessel*(PR–S)
y1 ..... *bessel*(PR–S)
yacc ..... *yacc*(PR–CP)
yes ..... *yes*(UR–C)
yn ..... *bessel*(PR–S)